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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/725,097

12/01/2003

J. Michael Corrigan

00259P0005US

1762

32116

7590

04/15/2008

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
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EXAMINER

ALEXANDER, REGINALD

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

04/15/2008

PAPER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/725,097
Filing Date: December 01, 2003
Appellant(s): CORRIGAN ET AL.

F. William McLaughlin
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 15 February 2008 appealing from the Office action mailed 17 September 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4,517,159	KARLSON	05-1985
5,350,117	KLEINBERGER et al	09-1994
6,120,822	DENVIR et al	09-2000

6,406,006

DETLING et al

06-2002

Webster's New World Dictionary, Second College Edition, copyright 1986, four pages.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 5, 9 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinberger et al. in view of Denvir et al.

There is disclosed in Kleinberger a humidification system for a refrigerated product holding case 12, including a holding space 15, the system comprising: a plurality of atomizing nozzles 40 positioned proximate the holding space and including a water inlet 32, 59 and an air inlet 124a; a water supply 27 and a control 35 selectively supplying pressurized water (by way of a pump 89) from the supply to the atomizing nozzle water inlet, the control including a timer 96 for intermittently supplying pressurized water.

Denvir teaches that it is known to use ozone to sterilize contained food products. There is disclosed in Denvir an ozone generator 14; and a pump (air compressor) 16 operatively connected between the ozone generator and an ozone delivery device located to deliver pressurized ozone within a food product containment vessel.

It would have been obvious to one skilled in the art to provide the system of Kleinberger with the pump and ozone generator arrangement taught in Denvir, in order to sterilize food products presented in the holding case with pressurized ozone.

In regards to claims 9 and 12, there is presented no structural arrangement described therein. It is apparent in the prior art that if water is not supplied to the nozzle, the nozzle would only deliver the ozonated air which is being supplied.

Claims 2-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinberg et al. in view of Denvir et al. as applied to claims 1 and 5 above, and further in view of Karlson.

Karlson discloses the use of an air inlet filter 16, air drier 20 and muffler 21 all connected to an inlet of an ozone generator 23.

It would have been obvious to one skilled in the art to provide the device of Kleinber, as modified by Denvir, with the filter, drier and muffler disclosed in Karlson, in order to enhance (treat) the gas provided to the nozzle.

Claims 1, 5, 9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dettling et al. in view of Denvir et al.

Dettling discloses a refrigerated display case 10 comprising: air atomizing nozzle 28 (col. 11, lines 65, 66 discloses more than one can be used) positioned proximate the display case, each including a water inlet 22 and an air inlet 36; an air compressor 32 connected to the air supply inlet of the nozzle; and a water supply (col. 5, lines 62, 63) and water control 26.

Denvir, as discussed above, teaches that it is known in the art to use ozone to sterilize contained food products, wherein an ozone generator 14 is provided and a compressor (pump) 16 is operatively connected between the ozone generator and an ozone delivery device located within a food product containment vessel.

It would have been obvious to one skilled in the art to provide the system of Dettling with the ozone generator taught in Devir, in order to sterilize as well as humidify food products presented in the display case.

In regards to claims 9 and 12, there is presented no structural arrangements therein. It is apparent that if water is not supplied to the nozzle it would only deliver the ozonated air which is being supplied.

Claims 2-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dettling et al. in view of Denvir et al. as applied to claims 1 and 5 above, and further in view of Karlson.

Karlson discloses the use of an air inlet filter 16, air drier 20 and muffler 21 all connected to an inlet of an ozone generator 23.

It would have been obvious to one skilled in the art to provide the device of Dettling, as modified by Denvir, with the filter, drier and muffler disclosed in Karlson, in order to enhance (treat) the gas provided to the nozzle.

Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dettling et al. in view of Denvir et al. as applied to claims 1 and 6 above, and further in view of Kleinberger et al.

Kleinberger discloses that it is known in the art to use a timer 96 with a water supply for providing pressurized water.

It would have been obvious to one skilled in the art to provide the water supply control of Dettling, as modified by Denvir, with the timer taught in Kleinberger, in order to provide a controlled supply of water to the system.

(10) Response to Argument

Ground 1, Claims 1, 5, 10, 11 and 13

Appellant argues that neither of the references (Kleinberger, Denvir), alone or in combination, discloses or suggests using an atomizing nozzle delivering ozonated vapor in a humidification system. Appellant goes on to state that the nozzle of Kleinberger is not an air atomizing nozzle and that there is no pressurized air used.

In response it should be first noted that claim 1 does not require an “air atomizing nozzle” and there is only a broad recitation of an air compressor between the ozone generator and the nozzle. In Denvir there is disclosed the pump (compressor) for delivering pressurized ozone to the food product. In Kleinberger air is drawn into the nozzle from an inlet 124a as pressurized water vapor is formed therein. Thus, the air is pressurized at some point as it is mixed with the pressurized water vapor. Appellants claims recite an air compressor to deliver pressurized ozone, there is no mention of the delivery of ozone and air. Thus, in the broadest interpretation of the claims a source (compressor) is used to deliver ozone under pressure. It is the examiner’s position that the pump (compressor) of Denvir is equivalent to the claimed air compressor in its use for delivering ozone under pressure. Based upon the definition provided in Webster’s the production of a fine water vapor by the nozzle of Kleinberger defines it as an atomizing nozzle. The use of pressurized air does not define a nozzle as an atomizing nozzle.

Appellant argues that a pump can not be equated to an air compressor because a pump moves air but does not compress it. Based upon the definition provided in

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Webster's a compressor is defined as a machine, especially a pump which can compress air.

Appellant argues that neither Kleinberger or Denvir disclose combining pressurized air with pressurized water. It should first be noted that appellant fails to recite in the claims the use of pressurized air at the inlet of a nozzle. Appellant discloses pressurized ozone at the nozzle entry. Turning to Kleinberger, as stated above, the air from inlet 124a is pressurized when it is drawn into the nozzle by way of the pressurized water vapor. Appellant states in the arguments that the element 124a is not to the atomizing nozzle. The atomizing nozzle 40 consist of several different elements which together provide for the delivery of a fine mist. The housing into which the inlet 124a opens is one of those elements and thus, part of the nozzle.

Ground 1, claims 9 and 12

Appellant argues again that the prior art is not properly combined and fails to disclose the delivery of ozonated air. This point has been addressed above with reference to the Kleinberger inlet 124a and how it is incorporated into the pressurized water vapor.

Ground 2, claims 2-4 and 6-8

Appellant states that Karlson fails to overcome the deficiencies of Kleinberger and Denvir, and the combination of references is not proper. Since no argument of facts has been presented here, a statement that the combination of references is indeed proper based upon the examiner's arguments presented above, will be sufficient response.

Ground 3, claims 1, 5, 11

Appellant argues that no combination of references (Dettling and Denvir) produces a system using an atomizing nozzle receiving pressurized ozone and pressurized water to develop ozonated vapor. Appellant again states that the pump of Denvir is not an air compressor and substituting the air supply of Dettling for the pump of Denvir is not appropriate.

It should be noted that the rejection of claims involving Dettling and Denvir does not suggest substituting the air compressor of Dettling, only providing to Dettling the ozone generator taught in Denvir. Dettling discloses all of the claimed subject matter except for an ozone generator. Denvir not only discloses the use of an ozone generator, but the placement of the generator before a compressor (pump) and delivery device thus, teaching that ozone can be removed from a generator and passed to a delivery device. With Dettling already disclosing an air compressor (pump), it would have been obvious to one skilled in the art to place with that system an ozone generator, as taught in Denvir, so as to allow ozone to be delivered to the nozzle as well as water vapor. This arrangement would allow for sterilizing and hydration of food products within the refrigerated display case. Appellant goes on to state that Denvir (col. 3, lines 45-58) teaches that ozone decomposition is accelerated by water and at higher pressures. A review of Denvir at the recited location indicates that Denvir is aware that ozone is not suited for storage of long periods of time. This is opposite of what Dettling would be teaching in a food display case, which would be storage for short periods of time. Appellant states additionally that at col. 5, lines 18-24 Denvir further teaches against the

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combination. A view of this passage shows that Denvir is only citing desirable results for an ozone distribution system. There is nothing here which would teach against combining with the Dettling system.

Ground 3, claims 9 and 12

Appellant argues that the when the system of Dettling is turned off the compressor does not operate. Therefor the nozzle would not deliver ozonated air.

In response to this argument it should be noted that the claims do not make note of the system being turned off. The claims state that when pressurized water is not being supplied, the atomizing nozzle delivers ozonated air. This would most certainly be the case in the prior art if pressurized water were not being supplied.

Ground 4, claims 2-4 and 6-8

Again appellant states that Karlson fails to disclose the deficiencies of Dettling and Denvir, and therefore the rejection is improper. This point has been addressed above.

Ground 5, claims 12 and 13

Appellant states that Kleinberger does not disclose the deficiencies of the prior art and therefore the rejection is improper. With the lack of any specific facts here it is stated that the response to applicant's arguments above, involving claim 11, is sufficient.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Reginald L. Alexander/

Primary Examiner, Art Unit 3742

Conferees:

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